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## INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

(Chapter II of the Patent Cooperation Treaty)

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference XA 1727	<b>FOR FURTHER ACTION</b> See Form PCT/PEA/416	
International application No. PCT/GB2004/003653	International filing date (day/month/year) 26.08.2004	Priority date (day/month/year) 05.09.2003
International Patent Classification (IPC) or national classification and IPC F16H25/20		
Applicant BAE SYSTEMS PLC et al.		
<p>1. This report is the international preliminary examination report, established by this International Preliminary Examining Authority under Article 35 and transmitted to the applicant according to Article 36.</p> <p>2. This REPORT consists of a total of 8 sheets, including this cover sheet.</p> <p>3. This report is also accompanied by ANNEXES, comprising:</p> <p>a. <input type="checkbox"/> sent to the applicant and to the International Bureau) a total of sheets, as follows:</p> <p><input type="checkbox"/> sheets of the description, claims and/or drawings which have been amended and are the basis of this report and/or sheets containing rectifications authorized by this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions).</p> <p><input type="checkbox"/> sheets which supersede earlier sheets, but which this Authority considers contain an amendment that goes beyond the disclosure in the international application as filed, as indicated in item 4 of Box No. I and the Supplemental Box.</p> <p>b. <input type="checkbox"/> (sent to the International Bureau only) a total of (indicate type and number of electronic carrier(s)) , containing a sequence listing and/or tables related thereto, in computer readable form only, as indicated in the Supplemental Box Relating to Sequence Listing (see Section 802 of the Administrative Instructions).</p>		
<p>4. This report contains indications relating to the following items:</p> <p><input checked="" type="checkbox"/> Box No. I Basis of the opinion</p> <p><input type="checkbox"/> Box No. II Priority</p> <p><input checked="" type="checkbox"/> Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability</p> <p><input checked="" type="checkbox"/> Box No. IV Lack of unity of invention</p> <p><input checked="" type="checkbox"/> Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement</p> <p><input type="checkbox"/> Box No. VI Certain documents cited</p> <p><input type="checkbox"/> Box No. VII Certain defects in the international application</p> <p><input type="checkbox"/> Box No. VIII Certain observations on the international application</p>		
Date of submission of the demand  13.12.2004	Date of completion of this report  12.08.2005	
Name and mailing address of the international preliminary examining authority:  European Patent Office D-80298 Munich Tel. +49 89 2399 - 0 Tx: 523656 epmu d Fax: +49 89 2399 - 4465	Authorized Officer  Hassiotis, V  Telephone No. +49 89 2399- 	

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**Box No. I Basis of the report**

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1. With regard to the **language**, this report is based on the international application in the language in which it was filed, unless otherwise indicated under this item.
- ☐ This report is based on translations from the original language into the following language , which is the language of a translation furnished for the purposes of:
- ☐ international search (under Rules 12.3 and 23.1(b))
  - ☐ publication of the international application (under Rule 12.4)
  - ☐ international preliminary examination (under Rules 55.2 and/or 55.3)
2. With regard to the **elements\*** of the international application, this report is based on *(replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report)*:

**Description, Pages**

1-13 as originally filed

**Claims, Numbers**

1-12 as originally filed

**Drawings, Sheets**

1/9-9/9 as originally filed

- ☐ a sequence listing and/or any related table(s) - see Supplemental Box Relating to Sequence Listing
3. ☐ The amendments have resulted in the cancellation of:
- ☐ the description, pages
  - ☐ the claims, Nos.
  - ☐ the drawings, sheets/figs
  - ☐ the sequence listing *(specify)*:
  - ☐ any table(s) related to sequence listing *(specify)*:
4. ☐ This report has been established as if (some of) the amendments annexed to this report and listed below had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).
- ☐ the description, pages
  - ☐ the claims, Nos.
  - ☐ the drawings, sheets/figs
  - ☐ the sequence listing *(specify)*:
  - ☐ any table(s) related to sequence listing *(specify)*:

\* If item 4 applies, some or all of these sheets may be marked "superseded."

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**Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability**

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1. The questions whether the claimed invention appears to be novel, to involve an inventive step (to be non-obvious), or to be industrially applicable have not been examined in respect of:
- ☐ the entire international application,
  - ☒ claims Nos. 6-12
- because:
- ☐ the said international application, or the said claims Nos. relate to the following subject matter which does not require an international preliminary examination (specify):
  - ☐ the description, claims or drawings (*indicate particular elements below*) or said claims Nos. are so unclear that no meaningful opinion could be formed (*specify*):
  - ☐ the claims, or said claims Nos. are so inadequately supported by the description that no meaningful opinion could be formed.
  - ☒ no international search report has been established for the said claims Nos. 6-12
  - ☐ the nucleotide and/or amino acid sequence listing does not comply with the standard provided for in Annex C of the Administrative Instructions in that:
    - the written form ☐ has not been furnished
    - ☐ does not comply with the standard
    - the computer readable form ☐ has not been furnished
    - ☐ does not comply with the standard
  - ☐ the tables related to the nucleotide and/or amino acid sequence listing, if in computer readable form only, do not comply with the technical requirements provided for in Annex C-*bis* of the Administrative Instructions.
  - ☐ See separate sheet for further details

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**Box No. IV Lack of unity of invention**

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1. ☒ In response to the invitation to restrict or pay additional fees, the applicant has:
- ☐ restricted the claims.
  - ☐ paid additional fees.
  - ☐ paid additional fees under protest.
  - ☒ neither restricted nor paid additional fees.
2. ☐ This Authority found that the requirement of unity of invention is not complied with and chose, according to Rule 68.1, not to invite the applicant to restrict or pay additional fees.
3. This Authority considers that the requirement of unity of invention in accordance with Rules 13.1, 13.2 and 13.3 is
- ☐ complied with.
  - ☒ not complied with for the following reasons:  
**see separate sheet**
4. Consequently, this report has been established in respect of the following parts of the international application:
- ☐ all parts.
  - ☒ the parts relating to claims Nos. 1-5 .

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**Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**

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1. Statement

Novelty (N)	Yes: Claims	5
	No: Claims	1-4
Inventive step (IS)	Yes: Claims	
	No: Claims	5
Industrial applicability (IA)	Yes: Claims	1-5
	No: Claims	

2. Citations and explanations (Rule 70.7):

**see separate sheet**

**Re Item III,IV.**

The separate inventions/groups of inventions are:

1-5

Claims 1-5 relate to an apparatus for releasing a jam wherein the jam release device and the device for operating the jam release device are electrical.

6-12

Claims 6-12 relate to an apparatus for releasing a jam, wherein the jam release device and the device for operating the jam release device are mechanical.

They are not so linked as to form a single general inventive concept (Rule 13.1 PCT) for the following reasons:

1. The application does not relate to one single group of inventions linked by a single general inventive concept as is required by Art. 3 and Rule 13 PCT:

a. The two groups of inventions share the features of a device for releasing the jam and a device for operating the jam release device. These common features are, however, well known (see e.g. D1).

b. Furthermore the two groups of inventions relate to various objects which are not linked so as to provide the necessary inventive unifying concept :

Group 1 (claims 1-5) relates to an apparatus for releasing a jam, wherein the device for releasing the jam and the device for operating the jam release device are electrical.

Group 2 (claims 6-12) relates to an apparatus for releasing a jam, wherein the device for releasing the jam and the device for operating the jam release device are mechanical.

3. Thus, the necessary special relationship as required by Rule 13(2) PCT is not provided. Hence, the requirements of unity of invention are not met.

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A comprehensive search for the other one invention would have caused major additional searching efforts.

4. The application relates to a plurality of inventions, or groups of inventions, in the sense of Rule 13.1 PCT. They have been divided as defined above. If the applicant pays additional fees for one not yet searched group of invention, then the further search may reveal further prior art that gives evidence of a further lack of unity "a posteriori" within one (or more) of the not yet searched group. In such a case only the first invention in this (each of these) group(s) of inventions, which is considered to lack unity of invention, will be the subject of a search.

No further invitation to pay further additional fees will be issued. This is because Article 17(3)(a) PCT stipulates that the ISA shall establish the International Search Report on those parts of the international application which relate to the invention first mentioned in the claims ("main invention") and for those parts which relate to inventions in respect of which the additional fees were paid. Neither the PCT nor the PCT Guidelines provide a legal basis for further invitations to pay further additional search fees (W17/00, point 11 and W1/97, points 11-16).

**Re Item V.**

- 1 The following documents are referred to in this communication:
- D1: DE 202 13 740 U (S & R AUTOMATION SYSTEMS GMBH) 21 November 2002
  - D2: DE 11 98 159 B (FRITZ ELLER) 5 August 1965
  - D3: US-A-4 910 419 (HAYASHI SHUJI ET AL) 20 March 1990
  - D4: US-A-2 466 426 (HOOVER VAINO A) 5 April 1949

**2. Independent Claim 1**

**2.1 Novelty**

Claim 1 is represented in such a general way that anyone of the cited documents D1-D3 can be used to show that all features of claim 1 are known, see for example in document **D1**, that clearly shows in figure 1

*An apparatus for releasing a jam between an inter-engaged lead screw and nut in a motor driven lead screw actuator under load, including  
a device for releasing the jam and  
a device for operating the jam release device (see page 2) when the normal operating correlation between torque applied to the actuator by the motor (3) and the output force of the actuator corresponding to normal unjammed operation of the actuator under load is lost.*

Therefore, the present application does not satisfy the criterion set forth in Article 33 (2) PCT because the subject-matter of independent claim 1, represented in such a broad way, is not new in respect of prior art as defined in the regulations (Rule 64 (1)-(3) PCT).

### **1.2. Claims 2-5 depending on Claim 1**

Claims 2-5 depending on claim 1 and having as subject-matter special embodiments of the invention according to claim 1 do not fulfil the provisions of the PCT (Art. 33 and Rule 6 PCT) since their validity is dependent on that of claim 1, which has been denied.

Further, the features of the following claims do not add new features or anything of inventive significance (in the sense of Art. 33 (3) PCT) to the subject-matter of claim 1, the features being at least per se - known from the documents listed below:

- **claims 2-4:** Document D1; see page 2 and figure 2.

The features of **claim 5** have been used for the same purpose in a similar *apparatus* in D4. Therefore claim 5 does not satisfy the criterion set forth in Art. 33(3)PCT.

### **3. Further comments**

The closest prior art document D1 is not identified in the description and the relevant background art disclosed therein is not briefly discussed.

Reference signs in parentheses are not inserted in the claims to increase their intelligibility. This applies to both the preamble and characterising portion.

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The independent claim 1 is not cast properly in the two part form, with those features which in combination are part of the closest prior art being placed in the preamble.